# **Complete Summary**

#### **GUIDELINE TITLE**

Routine prenatal care.

## **BIBLIOGRAPHIC SOURCE(S)**

Institute for Clinical Systems Improvement (ICSI). Routine prenatal care. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 87 p. [260 references]

## **GUIDELINE STATUS**

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

## **COMPLETE SUMMARY CONTENT**

SCOPE METHODOLOGY - including Rating Scheme and Cost Analysis RECOMMENDATIONS EVIDENCE SUPPORTING THE RECOMMENDATIONS BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS **CONTRAINDICATIONS** QUALIFYING STATEMENTS IMPLEMENTATION OF THE GUIDELINE INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES IDENTIFYING INFORMATION AND AVAILABILITY **DISCLAIMER** 

## **SCOPE**

# **DISEASE/CONDITION(S)**

- Preconception and pregnancy (Counseling; Screening)
- Perinatal complications (*Prevention; Risk Assessment*)

# **GUIDELINE CATEGORY**

Counseling Evaluation Prevention Risk Assessment Screening

## **CLINICAL SPECIALTY**

Family Practice
Internal Medicine
Nursing
Obstetrics and Gynecology
Preventive Medicine

#### **INTENDED USERS**

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Nurses
Physician Assistants
Physicians
Public Health Departments

# **GUIDELINE OBJECTIVE(S)**

- To increase the percentage of pregnant women who receive timely, comprehensive screens for risk factors
- To increase the percentage of pregnant women who receive timely prenatal counseling and education as outlined in the guideline
- To increase the rate of appropriate interventions for identified change in status in women with preterm birth (PTB) risk factors
- To increase the percentage of vaginal birth after Cesarean (VBAC)-eligible women who receive documented education describing risks and benefits of VBAC
- To increase the number of first-trimester patients who have documentation of counseling about appropriate aneuploidy screening

#### **TARGET POPULATION**

All women who are pregnant or are considering pregnancy

## INTERVENTIONS AND PRACTICES CONSIDERED

## **Screening Maneuvers**

- 1. Risk profiles, including preconception risk assessment, preterm labor risks, workplace/lifestyle hazards assessment, infectious disease risks, genetic risks, risks of vaginal birth after Cesarean
- 2. Screening for rubella/rubeola and varicella status
- 3. Height, weight, blood pressure, history, and physical
- 4. Breast examination, abdominal/pelvic examination, cervix check
- 5. Laboratory studies
  - Cholesterol
  - Cervical cancer screening

- ABO/Rh/antibodies
- Syphilis
- Urine culture
- Hemoglobin
- Fetal aneuploidy screening
- Hepatitis B surface antigen
- Human immunodeficiency virus (HIV)
- Blood lead screening
- Gonococci/Chlamydia
- Gestational diabetes mellitus test and postpartum surveillance
- 6. Fetal heart tones, fetal position, fundal height, obstetric ultrasound
- 7. Domestic abuse

# **Counseling, Education and Interventions**

- 1. Preterm labor (PTL) education and prevention
- 2. Complete inventory of medications, herbal supplements, and vitamins
- 3. Accurate recording of menstrual dates
- 4. Counseling on risks and benefits of vaginal birth after Cesarean
- 5. Prenatal and lifestyle education

## **Immunization and Chemoprophylaxis**

- 1. Vaccinations: varicella, rubella/rubeola [measles/mumps/rubella-MMR], hepatitis B, tetanus-diphtheria [Td] booster and influenza
- 2. RhoGAM D immunoglobulin
- 3. Hepatitis B immunoglobulin
- 4. Nutritional supplements, including folic acid supplementation
- 5. Progesterone for women at high-risk for preterm delivery
- 6. Treatment of HIV-infected mothers with a combination antiretroviral therapy using zidovudine as a backbone
- 7. Intrapartum antibiotic prophylaxis for group B *Streptococcus* (GBS) culture positive and negative women

# **MAJOR OUTCOMES CONSIDERED**

- Cost-effectiveness of prenatal care
- Sensitivity and specificity of screening maneuvers
- Maternal/fetal health outcomes

## **METHODOLOGY**

# METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

## DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A literature search of clinical trials, meta-analysis, and systematic reviews is performed.

## **NUMBER OF SOURCE DOCUMENTS**

Not stated

# METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

## **Conclusion Grades:**

Key conclusions (as determined by the work group) are supported by a conclusion grading worksheet that summarizes the important studies pertaining to the conclusion. Individual studies are classed according to the system presented below and are designated as positive, negative, or neutral to reflect the study quality. Conclusion grades are determined by the work group based on the following definitions:

**Grade I**: The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of any significant doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power.

**Grade II**: The evidence consists of results from studies of strong design for answering the question addressed, but there is some uncertainty attached to the conclusion because of inconsistencies among the results from the studies or because of minor doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the question addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

**Grade III**: The evidence consists of results from studies of strong design for answering the question addressed, but there is substantial uncertainty attached to the conclusion because of inconsistencies among the results of different studies or because of serious doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from a limited number of studies of weak design for answering the question addressed.

**Grade Not Assignable:** There is no evidence available that directly supports or refutes the conclusion.

## **Study Quality Designations:**

The quality of the primary research reports and systematic reviews are designated in the following ways on the conclusion grading worksheets:

**Positive**: indicates that the report or review has clearly addressed issues of inclusion/exclusion, bias, generalizability, and data collection and analysis.

**Negative**: indicates that these issues have not been adequately addressed.

**Neutral**: indicates that the report or review is neither exceptionally strong nor exceptionally weak.

**Not Applicable**: indicates that the report is not a primary reference or a systematic review and therefore the quality has not been assessed.

# **Evidence Grading System**

# A. Primary Reports of New Data Collection:

Class A: Randomized, controlled trial

Class B: Cohort study

Class C:

Non-randomized trial with concurrent or historical controls Case-control study Study of sensitivity and specificity of a diagnostic test Population-based descriptive study

Class D:

Cross-sectional study

Case series

Case report

# B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

Meta-analysis

Systematic review

Decision analysis

Cost-effectiveness analysis

Class R:

Consensus statement Consensus report Narrative review

Class X: Medical opinion

## METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses Systematic Review with Evidence Tables

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

#### METHODS USED TO FORMULATE THE RECOMMENDATIONS

**Expert Consensus** 

# DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

## **New Guideline Development Process**

A new guideline, order set, and protocol is developed by a 6- to 12-member work group that includes physicians, nurses, pharmacists, other healthcare professionals relevant to the topic, along with an Institute for Clinical Systems Improvement (ICSI) staff facilitator. Ordinarily, one of the physicians will be the leader. Most work group members are recruited from ICSI member organizations, but if there is expertise not represented by ICSI members, 1 or 2 members may be recruited from medical groups or hospitals outside of ICSI.

The work group will meet for seven to eight three-hour meetings to develop the guideline. A literature search and review is performed and the work group members, under the coordination of the ICSI staff facilitator, develop the algorithm and write the annotations and footnotes and literature citations.

Once the final draft copy of the guideline is developed, the guideline goes to the ICSI members for critical review.

#### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

#### **COST ANALYSIS**

The guideline developers reviewed published cost analyses.

#### METHOD OF GUIDELINE VALIDATION

Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

## **Critical Review Process**

Every newly developed guideline or a guideline with significant change is sent to Institute for Clinical Systems Improvement (ICSI) members for Critical Review. The purpose of critical review is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the guideline. Critical review also provides an opportunity for

clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes necessary across systems in their organization to implement the guideline.

All member organizations are expected to respond to critical review guidelines. Critical review of guidelines is a criterion for continued membership within the ICSI.

After the critical review period, the guideline work group reconvenes to review the comments and make changes, as appropriate. The work group prepares a written response to all comments.

# Approval

Each guideline, order set, and protocol is approved by the appropriate steering committee. There is one steering committee each for Respiratory, Cardiovascular, Women's Health, and Preventive Services. The Committee for Evidence-based Practice approves guidelines, order sets, and protocols not associated with a particular category. The steering committees review and approve each guideline based on the following:

- Member comments have been addressed reasonably.
- There is consensus among all ICSI member organizations on the content of the document.
- To the extent of the knowledge of the reviewer, the scientific recommendations within the document are current.
- Either a critical review has been carried out, or to the extent of the knowledge of the reviewer, the changes proposed are sufficiently familiar and sufficiently agreed upon by the users that a new round of critical review is not needed.

Once the guideline, order set, or protocol has been approved, it is posted on the ICSI Web site and released to members for use. Guidelines, order sets, and protocols are reviewed regularly and revised, if warranted.

## **Revision Process of Existing Guidelines**

ICSI scientific documents are revised every 12 to 36 months as indicated by changes in clinical practice and literature. Every 6 months, ICSI checks with the work group to determine if there have been changes in the literature significant enough to cause the document to be revised earlier than scheduled.

Prior to the work group convening to revise the document, ICSI members are asked to review the document and submit comments. During revision, a literature search of clinical trials, meta-analysis, and systematic reviews is performed and reviewed by the work group. The work group will meet for 1-2 three-hour meetings to review the literature, respond to member organization comments, and revise the document as appropriate.

If there are changes or additions to the document that would be unfamiliar or unacceptable to member organizations, it is sent to members to review prior to going to the appropriate steering committee for approval.

## **Review and Comment Process**

ICSI members are asked to review and submit comments for every guideline, order set, and protocol prior to the work group convening to revise the document.

The purpose of the Review and Comment process is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the order set and protocol. Review and Comment also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes needed across systems in their organization to implement the guideline.

All member organizations are encouraged to provide feedback on order sets and protocol, however responding to Review and Comment is not a criterion for continued membership within ICSI.

After the Review and Comment period, the work group reconvenes to review the comments and make changes as appropriate. The work group prepares a written response to all comments.

#### **RECOMMENDATIONS**

#### **MAJOR RECOMMENDATIONS**

**Note**: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical systems Improvement (ICSI): For a description of what has changed since the previous version of this guidance, refer to Summary of Changes Report - August 2007.

The recommendations for routine prenatal care are presented in the form of a table with accompanying annotations. Clinical highlights and a table for routine prenatal care follow. The reader is directed to the original guideline document for further discussion of each of the following topics.

## **Clinical Highlights**

- Identify patients with greater potential for high-risk for pregnancy and provide appropriate preconception counseling (*Annotation #4 -- see original guideline document*)
- Each pregnant patient should receive visit-specific screening tests, education, immunizations, and chemoprophylaxis as described on the prenatal care table.
- Each pregnant patient and each patient planning a pregnancy should receive a comprehensive risk assessment and appropriate risk-related interventions, including risks for preterm labor, relevant infectious diseases, and relevant genetic disorders (Annotations #2, 4 -- see the original guideline document).

- For patients with previous Cesarean section, provide education of risks and benefits associated with vaginal birth after Cesarean (VBAC). Assess and document patients' desire and appropriateness for VBAC (*Annotation #21 -- see original guideline document*).
- Counseling for appropriate aneuploidy testing (screening) should be offered to all pregnant women regarding the different screening options and the limitations and benefits of each of the screening and diagnostic tests (Annotation #23 – see original guideline document)

	Preconception	l .	Visit 2	Visit 3
Event	Visit	6-8 weeks	10-12 weeks	16-18 weeks
Screening	Risk profiles	Risk profiles	Weight	Weight \
Maneuvers	Height and	GC/Chlamydia	Blood pressure	Blood pressure E
	weight/BMI	GC/Cilialityula	blood pressure	blood pressure
	Weighty Di 11	Height and	Fetal heart tones	Fetal heart tones F
	Blood pressure	weight/BMI		
			Fetal aneuploidy	Fetal aneuploidy F
	History and physical	Blood pressure	screening	screening [
	,	History and		OB ultrasound
	Cholesterol and HDL	physical*		(optional)
		Rubella		Fundal height
	Cervical cancer			
	screening	Varicella		[Cervical
	Rubella/rubeola	Domostic abuse		assessment]
	Rubella/Tubeola	Domestic abuse		
	Varicella	Hemoglobin		
	Domestic abuse	ABO/Rh/Ab		
		Syphilis		
		Urine culture*		
		HIV		
		[Blood lead		
		screening]		
		[VBAC]		
		Hepatitis B surface Ag		
Counseling	PTL education	PTL education and	PTL education and	PTL education and
Education	and prevention	prevention	prevention	prevention
Intervention				
	Substance use	Prenatal and lifestyle education	Prenatal and lifestyle education	Prenatal and lifestyle Feducation
	Nutrition and	Euucation	Euucation	
			L	

	Preconception Visit 1**		Visit 2	Visit 3	
Event	Visit	6-8 weeks	10-12 weeks	16-18 weeks	
	weight  Domestic abuse  List of medications, herbal supplements, and vitamins  Accurate recording of menstrual dates	<ul> <li>Physical activity</li> <li>Nutrition</li> <li>Follow-up of modifiable risk factors</li> <li>Warning signs</li> <li>Course of care</li> <li>Physiology of pregnancy</li> </ul>	<ul> <li>Fetal growth</li> <li>Review lab results from visit 1</li> <li>Breast-feeding</li> <li>Physiology of pregnancy</li> <li>Follow-up of modifiable risk factors</li> </ul>	<ul> <li>Follow-up of modifiable risk factors</li> <li>Physiology of pregnancy</li> <li>Second trimester growth</li> <li>Quickening</li> </ul>	
		aneuploidy screening			
Immunization and Chemoprophylaxis	Tetanus booster Rubella/MMR			[Progesterone]	

Event	Visit 5 28 weeks	Visit 6 32 weeks	Visit 7 36 weeks	Visi 38-41
Screening Maneuvers	PTL risk	Weight	Weight	Weight
	Weight	Blood pressure	Blood pressure	Blood pres
	Blood pressure	Fetal heart tones	Fetal heart tones	Fetal hear
	Fetal heart tones	Fundal height	Fundal height	Fundal he
	Fundal height		Cervix exam	Cervix exa
	[Cervical assessment]		Confirm fetal position	
	GDM		Culture for group B	
	Domestic abuse		streptococcus	
	[Rh antibody status]			

Event	Visit 5 28 weeks	Visit 6 32 weeks	Visit 7 36 weeks	Visit 38-41
Counseling Education Intervention	28 weeks Hepatitis B surface Ag  [GC/Chlamydia] PTL education and prevention  Prenatal and lifestyle education  • Follow-up of modifiable risk factors • Work • Physiology of pregnancy • Preregistration • Fetal growth	32 weeks	Prenatal and lifestyle education  • Follow-up of modifiable risk factors • Postpartum care • Management of late pregnancy symptoms • Contraception • When to call provider • Discussion of postpartum	_
Immunization and	Awareness of fetal movement	issues Warning signs/ pregnancy-induced hypertension [VBAC]	depression	
Chemoprophylaxis	[ABO/Rh/Ab (RhoGAM)]			

[Bracketed] items refer to high risk groups only.

**Abbreviations**: ABO, BMI, body mass index; CPR, cardiopulmonary resuscitation; GC, gonococci; GDM, gestational diabetes mellitus; HDL, high density lipoprotein; HIV, human immunodeficiency virus; MMR, measles/mumps/rubella; OB, obstetrics; PTL, preterm labor; RhoGAM, Rho(D) immune globulin; VBAC, vaginal birth after Cesarean; VZIG, varicella zoster immune globulin

## **Practices to Consider Discontinuing**

- Pelvimetry
- · Routine urine dipsticks and routine urinalysis
- · Routine evaluation for edema
- Routine testing for cytomegalovirus (CMV), parvovirus, toxoplasmosis
- Routine nutritional supplements
- Routine testing for bacterial vaginosis (may be necessary in women with a history of preterm labor)

# **CLINICAL ALGORITHM(S)**

<sup>\*</sup>It is acceptable for the history and physical and laboratory tests listed under Visit 1 to be deferred to Visit 2 with the agreement of both the patient and the provider.

<sup>\*\*</sup> Should also include all subjects listed for the preconception visit if none occurred.

The following algorithms are provided in Appendix H of the original guideline document:

- Aneuploidy Testing Integrated Screening Tool
- Aneuploidy Testing Stepwise Sequential Screening Tool
- Aneuploidy Testing Contingency Screening Tool

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### **POTENTIAL BENEFITS**

Appropriate and cost-effective prenatal care

#### **POTENTIAL HARMS**

Zidovudine has had a low incidence of severe side effects in the mothers and infants studied. It does transmit to the fetus and is associated in animal studies with early pregnancy failure, but does not appear to cause fetal abnormality.

## **CONTRAINDICATIONS**

## **CONTRAINDICATIONS**

- Refer to Annotation #21 in the original guideline document for information on contraindications to vaginal birth after Cesarean (VBAC).
- Vaccination against influenza is contraindicated for women with a history of hypersensitivity to chicken eggs or to vaccine components such as the preservatives.
- High doses of vitamin A and molybdenum supplements are contraindicated in pregnancy.

## **QUALIFYING STATEMENTS**

# **QUALIFYING STATEMENTS**

- These clinical guidelines are designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and are not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.
- This clinical guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients are urged to

consult a health care professional regarding their own situation and any specific medical questions they may have.

## **IMPLEMENTATION OF THE GUIDELINE**

## **DESCRIPTION OF IMPLEMENTATION STRATEGY**

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. An action group is formed when a topic is selected as an initiative. In addition to the action group and measures, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

#### **IMPLEMENTATION TOOLS**

Chart Documentation/Checklists/Forms Clinical Algorithm Patient Resources Pocket Guide/Reference Cards Quality Measures Staff Training/Competency Material

For information about <u>availability</u>, see the "Availability of Companion Documents" and "Patient Resources" fields below.

## **RELATED NQMC MEASURES**

- Routine prenatal care: percentage of pregnant women who received counseling and education by the 28th week visit.
- Routine prenatal care: percentage of all identified preterm birth (PTB) modifiable risk factors assessed that receive an intervention.
- Routine prenatal care: percentage of vaginal birth after cesarean (VBAC)
   eligible women who receive general education describing risks and benefits of
   VBAC (e.g., the American College of Obstetricians and Gynecologists [ACOG]
   pamphlet on VBAC).

# INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

## **IOM CARE NEED**

Staying Healthy

#### IOM DOMAIN

Effectiveness Patient-centeredness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

## **BIBLIOGRAPHIC SOURCE(S)**

Institute for Clinical Systems Improvement (ICSI). Routine prenatal care. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 87 p. [260 references]

#### **ADAPTATION**

Not applicable: The guideline was not adapted from another source.

## **DATE RELEASED**

1997 Aug (revised 2007 Aug)

## **GUIDELINE DEVELOPER(S)**

Institute for Clinical Systems Improvement - Private Nonprofit Organization

## **GUIDELINE DEVELOPER COMMENT**

Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Community Medical Centers, Allina Medical Clinic, Altru Health System, Aspen Medical Group, Avera Health, CentraCare, Columbia Park Medical Group, Community-University Health Care Center, Dakota Clinic, ENT Specialty Care, Fairview Health Services, Family HealthServices Minnesota, Family Practice Medical Center, Gateway Family Health Clinic, Gillette Children's Specialty Healthcare, Grand Itasca Clinic and Hospital, HealthEast Care System, HealthPartners Central Minnesota Clinics, HealthPartners Medical Group and Clinics, Hutchinson Area Health Care, Hutchinson Medical Center, Lakeview Clinic, Mayo Clinic, Mercy Hospital and Health Care Center, MeritCare, Mille Lacs Health System, Minnesota Gastroenterology, Montevideo Clinic, North Clinic, North Memorial Care System, North Suburban Family Physicians, Northwest Family Physicians, Olmsted Medical Center, Park Nicollet Health Services, Pilot City Health Center, Quello Clinic, Ridgeview Medical Center, River Falls Medical Clinic, Saint Mary's/Duluth Clinic Health System, St. Paul Heart Clinic, Sioux Valley Hospitals and Health System, Southside Community Health Services, Stillwater Medical

Group, SuperiorHealth Medical Group, University of Minnesota Physicians, Winona Clinic, Ltd., Winona Health

ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; e-mail: <a href="mailto:icsi.info@icsi.org">icsi.info@icsi.org</a>; Web site: <a href="https://www.icsi.org">www.icsi.org</a>.

# **SOURCE(S) OF FUNDING**

The following Minnesota health plans provide direct financial support: Blue Cross and Blue Shield of Minnesota, HealthPartners, Medica, Metropolitan Health Plan, PreferredOne and UCare Minnesota. In-kind support is provided by the Institute for Clinical Systems Improvement's (ICSI) members.

#### **GUIDELINE COMMITTEE**

Ob/Gyn Steering Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Committee Members: Dale Akkerman, MD (Work Group Leader) (Park Nicollet Health Services) (OB/GYN); Tamara Johnston, MD (Northwest Family Physicians) (Family Medicine); Katie Klingberg, MD (Northpoint Health and Wellness) (Family Medicine); Kari Rabie, MD (Southside Community Health Services) (Family Medicine); Jennifer Schriever, MD (Sioux Valley Hospitals and Health System) (Family Medicine); Carol Stark, MD (Family HealthServices Minnesota) (Family Medicine); Peter Van Eerden, MD (Sioux Valley Hospitals and Health System) (Maternal-Fetal Medicine); Georgeanne Croft, CNM (HealthPartners Medical Group) (Nurse Midwifery); Amy Knox, CNM (Park Nicollet Health Services) (Nurse Midwifery); John A. Jefferies, MD (Mayo Clinic) (OB/GYN); Joan Kreider, MD (HealthPartners Medical Group) (OB/GYN); John Vickers, MD (HealthPartners Medical Group) (OB/GYN); Corinne Esch, RN, CDS (HealthPartners Medical Group) (OB/GYN Nursing); Nancy Jaeckels (Institute for Clinical Systems Improvement) (Implementation Advisor); Linda Setterlund, MA (Institute for Clinical Systems Improvement) (Facilitator)

# FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

In the interest of full disclosure, Institute for Clinical Systems Improvement (ICSI) has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. The reader should not assume that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform users. Readers of the guideline may assume that only work group members listed below have potential conflicts of interest to disclose.

No work group members have potential conflicts of interest to disclose.

ICSI's conflict of interest policy and procedures are available for review on ICSI's Web site at http://www.icsi.org.

#### **GUIDELINE STATUS**

**Note**: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

## **GUIDELINE AVAILABILITY**

Electronic copies of the updated guideline: Available from the <u>Institute for Clinical</u> Systems Improvement (ICSI) Web site.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: <a href="www.icsi.org">www.icsi.org</a>; e-mail: <a href="icsi.info@icsi.org">icsi.info@icsi.org</a>.

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- Routine prenatal care. Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Aug. 1 p. Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.
- ICSI pocket guidelines. April 2006 edition. Bloomington (MN): Institute for Clinical Systems Improvement, 2006. 298 p.

Appendices A – I of the <u>original guideline document</u> include risk assessment forms, prenatal worksheets, screening algorithms, and additional educational material.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

#### **PATIENT RESOURCES**

The following is available:

• Routine prenatal care. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Sept. 50 p.

Electronic copies: Available from the <u>Institute for Clinical Systems Improvement</u> (ICSI) Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## **NGC STATUS**

This summary was completed by ECRI on February 15, 2000. The information was verified by the guideline developer on March 15, 2000. This summary was updated by ECRI on April 19, 2001, May 7, 2002, February 5, 2003, March 25, 2004, November 12, 2004, and October 13, 2005. This summary was updated by ECRI on March 3, 2006 following the FDA advisory on varicella zoster immune globulin (VZIG). This summary was updated by ECRI on November 30, 2006. This NGC summary was updated by ECRI Institute on December 14, 2007.

#### **COPYRIGHT STATEMENT**

This NGC summary (abstracted Institute for Clinical Systems Improvement [ICSI] Guideline) is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

The abstracted ICSI Guidelines contained in this Web site may be downloaded by any individual or organization. If the abstracted ICSI Guidelines are downloaded by an individual, the individual may not distribute copies to third parties.

If the abstracted ICSI Guidelines are downloaded by an organization, copies may be distributed to the organization's employees but may not be distributed outside of the organization without the prior written consent of the Institute for Clinical Systems Improvement, Inc.

All other copyright rights in the abstracted ICSI Guidelines are reserved by the Institute for Clinical Systems Improvement, Inc. The Institute for Clinical Systems Improvement, Inc. assumes no liability for any adaptations or revisions or modifications made to the abstracts of the ICSI Guidelines.

## **DISCLAIMER**

#### **NGC DISCLAIMER**

The National Guideline Clearinghouse<sup>™</sup> (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <a href="http://www.guideline.gov/about/inclusion.aspx">http://www.guideline.gov/about/inclusion.aspx</a>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily

state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2008 National Guideline Clearinghouse

Date Modified: 9/29/2008

